

SAAP MANUAL

Special Advertisement and Award Process

April, 2001

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Virginia Department of Transportation
Construction Division

March 27, 2001

MEMORANDUM

To: District Administrators
District Maintenance Engineers
District Construction Engineers
Subject: SAAP Manual

Attached is a copy of the Special Advertisement and Award Process (SAAP) Manual. The purpose of this manual is to update the general guidelines and procedures, including some helpful resources to improve the usefulness of this process. This manual addresses technological changes that have taken place in the last few years such as the CNSP program and the TRNS*PORT system.

I would also like to take this opportunity to reiterate certain points. First, the Engineer's Estimate and documentation is to be kept in a secure location. Preliminary estimates are to be regarded as working documents and not disclosed except as allowed under Freedom of Information (FOI) act. The final Engineer's Estimate is not to be shared. As set forth in the Code of Virginia these final estimates are exempt from FOI requests. Any request should be reviewed with the appropriate Assistant Construction Engineer.

The Districts are responsible for developing the Engineer's Estimate on all SAAP contracts. The estimate will be reviewed by Construction Division estimators, however no unit price changes will be made without approval from the District SAAP Coordinator. Documentation will be required for any TRNS*PORT generated prices that are changed, all non-standard items, and lump sum grading. This requirement has not changed. For security reasons, it should be placed in a secure District server file or mailed in a confidential envelope to the Construction Division SAAP Coordinator.

It is now required that this documentation be submitted to Construction Division for review prior to advertisement. I am also requiring a cost-based estimate for lump sum grading. Without this detail, it is difficult to evaluate the unit price for this item. Each District has an assigned estimator in the Construction Division that is available to assist you in developing documentation or pricing bid items.

Copies of the manual are being forwarded to the District SAAP Coordinators for distribution. If addition copies are needed, the manual is located on the Construction Division server and VDOT Intranet site at the following addresses respectively:

\\0501coconst\public\const. div. publications-manuals\SAAP Manual
<http://coweb/construction/>

The requirements of this manual are effective for projects going on the July, 2001, SAAP advertisement.

Original signed by
C. F. Gee
State Construction Engineer

Attachment

cc: District SAAP Coordinators
Resident Engineers

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INTRODUCTION

In 1984 the Department initiated a contracting procedure to expedite the bidding process for Selected Non-Federal Aid Maintenance Replacement and Incidental Improvement Projects. In CDO-84-4 issued February 9, 1984, the Department outlined general procedures for the **S**pecial **A**dvertisement and **A**ward **P**rocess, later dubbed SAAP.

Since 1984 the SAAP process has become one of the major contracting tools used by the Department. As it has grown, the process has undergone many changes. The most recent changes have included new computerized technology, the TRNS*PORT system and the Copied Note Special Provision (CNSP) program. The purpose of this manual is to update the general guidelines and procedures for the SAAP process, including some helpful resources to improve the usefulness of this tool.

GENERAL GUIDELINES

- I. Projects that include Federal funding **will not** be considered for the SAAP process.
- II. Projects that require a set of plans **will not** be considered for the SAAP process.
- III. To be considered for the SAAP process, projects should have one or more of the following characteristics:
 - they require little or no preliminary engineering
 - they are standard maintenance repair contracts (for example: bridge, guardrail or concrete pavement repairs)
 - they are standard incidental construction and/or improvement projects of limited scope
 - the work being performed involves a singular function or specialty work (for example: bridge painting, pavement markings or pipe installation)
- IV. Funding must be verified prior to submitting the proposal for advertisement. The District can verify projects involving maintenance funds. Projects involving Interstate, Primary or Secondary construction funds, however, will require verification by the Central Office. Contact the appropriate funding division, providing them the necessary information for their review and authorization.
- V. The SAAP proposal is the basis for the certified contract signed by the Chief Engineer. As such, it is a legal document. It is imperative that this assembly strictly adheres to the Virginia Public Procurement Act. In part, this Act states that construction may be procured only through public advertisement and competitive bid. For further details, refer to the Code of Virginia, Title 11 – Contracts.
- VI. To begin the process, the District will develop a bidding proposal assembly complete with the following items as applicable:
 - standard proposal forms
 - price sheets
 - contract provisions to include the special provisions, copied notes and sketches; with permits, railroad insurance and asbestos determinations when necessary
 - SAAP Submission Form (Form C-117) including the showing date, location and time when appropriate

- Submittal Letter including the state project number, TRNS*PORT contract ID, and funding information – do not include the Estimate amount in this letter!
 - No Plan & Minimum Plan Quantity Support Report (Form C-99) required on projects with a pay item for lump sum grading
- VII. Construction Division must receive the aforementioned proposal assembly **no later than** three (3) weeks prior to the scheduled advertisement date. Note this is a minimum time period. To ensure proper review and processing of the proposal, submit the completed assembly as early as possible.
- VIII. Projects are to be advertised on one of the pre-determined SAAP advertisement dates as established by Construction Division. Bids will be received and opened in approximately four (4) weeks, along with the Regular **A**dvertisement and **A**ward **P**rocess (RAAP) projects.
- IX. When it is determined that a project showing is necessary, or would be advantageous, it is to be conducted in accordance with current guidelines as distributed by the Construction Engineer. As a general rule, showings should be scheduled for two (2) weeks after advertisement. Mandatory showings should only be scheduled when the information to be presented cannot be clearly conveyed in the contract document. A copy of the showing minutes and all supporting documents are to be submitted to the Contract Engineer.
- X. The District will develop an Engineer's Estimate for the proposed work in the TRNS*PORT system. Once it is submitted to Construction Division, this estimate can only be revised with authorization from the District SAAP Coordinator. The unit prices on file at the close of business Tuesday prior to the bid letting will become the final Engineer's Estimate. This document will provide a basis for the recommendation of award or rejection to the Chief Engineer, and subsequently the Commonwealth Transportation Board (CTB).
- XI. Construction Division will normally receive bids on Tuesday, the prescribed letting date, and open them Wednesday, 24 hours later. By law, the bids must be opened and read publicly. Once this is done, Construction Division will perform a post-bid analysis in accordance with Department procedures. A recommendation to the Chief Engineer is generally made the Monday following receipt of bids. The District may be required to provide additional information to assist in making this recommendation. Consideration for award under both the RAAP and SAAP advertisement process will be in accordance with established Department guidelines.

- XII. The Commonwealth Transportation Board generally meets the third Thursday of each month. It is at this meeting that action will be taken to either "Award" or "Reject" projects as recommended by the Chief Engineer. Upon receipt of Board approval, Construction Division will publish bid tabulations for both SAAP and RAAP projects. Bid tabulations will only be published for projects that have been awarded; projects rejected by the CTB will not appear. Tabulations for the three lowest bidders can be found on Construction Division's website at www.vdot.state.va.us/conbbs. The original bids for all projects will be maintained in Central File.
- XIII. Once the apparent low bidder has submitted the required bonds, Certificate of Insurance, and other required paperwork, the Chief Engineer will execute the contract. Upon execution, a certified copy of the contract will be provided to the Contractor, District Administrator and Resident Engineer. Under separate cover, Construction Division will furnish the District Administrator several copies of the executed contract for use in the field. The districts will be responsible for reproducing any additional copies needed to meet their contract administration needs.

PROPOSAL ASSEMBLY

It should always be the principle goal of anyone developing a proposal to be as clear and precise as possible so the resulting contract is administratively complete. The Department has a quality standard for its bidding proposals that should not be compromised because of the shortened advertisement process. Bidding proposals, whether developed under the SAAP process, or as a regular advertised project (RAAP), should have the same standards of quality and clarity.

Bidding Proposal

Before beginning, contact the Construction Division for an “Order Number” to assign to the bidding proposal. The Order Number will be required on the proposal documents as well as the TRNS*PORT files.

Prepare the bidding proposal in accordance with the Copied Note Special Provision (CNSP) program. This program allows the user to print the standard proposal forms with a one-time entry of pertinent project data. It also allows for the selection and printing of all standard Copied Notes and Special Provisions, as well as creation of non-standard provisions or copied notes needed for a specific proposal. The program and its manual can be found on Construction Division’s server at [\\0501coconst\public\cnspl](#). The server is periodically updated to reflect any changes or revisions made to the *Road & Bridge Specifications*. These can then be incorporated into the CNSP program used in the various District locations.

Each bidding proposal should include the following standard forms:

Title Sheet	Form C-6a
Index	Index
Notice to Bidders	Form C-118
Proposal Guaranty	Form C-24
Conditional Withdrawal	Form CW
Price Adjustment	Form C-16a
Affidavit	Form C-100
Potential MBE Participation	Form C-61
Status of Work on Hand	Form C-42
Contractor’s Proposal to Sublet	Form C-43
Signature Sheet	Form C-7

The CNSP program will automatically generate the proposal Index. It is important to remember however, that if any revisions are made to the provisions

or copied notes, or if page breaks are inserted, the Index must be updated to reflect these changes.

The Form C-61 must be included in the proposal assembly, but Construction Division's DBE Section will complete it. The CNSP program will produce the signature page, or Form C-7, but the price sheets which are generally considered to be part of the Form C-7, will be generated by TRNS*PORT separately. Construction Division will print these from TRNS*PORT and insert them in the bidding proposal prior to printing.

Whenever possible SAAP proposals should endeavor to utilize the current *Road & Bridge Specifications* and the standard special provisions and copied notes included in the CNSP program. There will be occasions however, when unique situations require additional provisions. When these occasions occur, great care must be used not to be contradictory of other sections of the *Road & Bridge Specifications*.

Standard specifications will not be re-written by the districts unless approved by the Specification Engineer. If a special provision or copied note is required, the District SAAP Coordinator must contact the Construction Division Specification Section and work with them on an appropriate provision to cover the subject in question.

Similarly, standard pay items should be used whenever possible. Like specifications, however, there are instances when non-standard items must be used due to the unique circumstances of a particular project. Use of non-standard pay items requires a great deal of thought be given to the unit of measurement and the basis of payment. Not only must the related specification or provision cover material requirements and standards for this pay item; it must also include a complete explanation of its measurement and basis of payment. Pay items that are to be measured should clearly indicate pay limits in order that measurement can be made without disagreement. Items that are to be paid for as lump sum cannot overrun, therefore careful consideration should be given to this possibility. It is also imperative that the unit of measurement shown on the price sheets is the same unit of measurement used in the specification or special provision.

Lastly, remember that "lumping" items together is not always the most expedient or economical method of payment, especially if it causes confusion or allows for misunderstandings. When the pay unit is lump sum, the measurement and basis of payment must be fully described in order that payment covers what was intended. It must clearly explain what incidental items are to be included in the lump sum price. It should also identify any incidental items that should be included in the cost of other items. This is critical not only for payment, but also for bidding and estimating purposes.

SAAP Submission Form

In addition to the bidding proposal, the SAAP Submission Form, or Form C-117, is also required. This form is included in the CNSP program folder. It can also be found on Construction Division's server at <\\0501coconst\public\forms>. It is important that the information provided on the C-117 match the bidding proposal, as it is the C-117 information that is used to prepare the SAAP advertisement. Make sure the Contract ID, state project number, description and location are the same as shown on the CNSP bidding proposal. This information should also be consistent with what is in the TRNS*PORT system.

If a project showing is planned, include the date, time and location of the showing on the Form C-117. If the contractor is required to attend the showing, it must be clearly noted on the C-117 and the appropriate copied note included in the proposal document.

The Form C-117 is the only place within the proposal assembly that the estimated cost of the project should be shown. This figure should be rounded off to the nearest thousand dollars and be inclusive of the construction engineering and contingency costs. By including all anticipated expenditures, the funding division (Programming & Scheduling or Secondary Roads) will be able to verify available funds and if need be, determine additional funding needs.

An important part of the Form C-117 is certification that the right of way is clear; utilities have either been relocated or provisions have been made for their relocation; and that all environmental permit reviews have been made, completed and the permits have been obtained. The Department is required by law to review every proposed highway project to determine whether water quality permits are needed. Because SAAP projects lend themselves to a quick turnaround time, it is imperative that they are monitored closely and that the permit determinations are done in a timely manner. This will ensure the environmental requirements are fulfilled prior to advertisement. Projects received for advertisement under the SAAP process will not be accepted without a signed Form C-117.

Schedule of Items

Once the bidding proposal has been prepared using the CNSP program, the TRNS*PORT proposal should be created. This will include selecting the pay items, defining funding sources, and developing the Engineer's Estimate. Even though TRNS*PORT refers to this as the *Proposal*, it is the Schedule of Items, or price sheets, that are created in this process.

Follow instructions in the PES User's Manual for creating the TRNS*PORT proposal. This will include creating the Project(s), the Prime Project, and the Proposal. Each *Project* will include one or more categories, each of which will have funding and item information.

When selecting bid items, use standard items whenever possible. The use of standard items will result in a more reliable, and more extensive TRNS*PORT price bank. It will also ensure consistency between the *Road & Bridge Specifications* and the contract document, which will help alleviate problems during construction. If a non-standard item is required, select from the available non-standard item codes indicated with an "NS" prefix. All non-standard items will require a supplemental description and a specification number. Add only the additional descriptive information needed; do not repeat the non-standard description.

Once the TRNS*PORT proposal is complete, the price sheets should be printed and reviewed for accuracy. Make sure the item descriptions are accurate, the pay units are correct and that each item has a specification number. There is no need to include price sheets in the bidding proposal. Construction Division will print these from TRNS*PORT separately and include them before sending the proposal for printing.

Engineer's Estimate

The security of the Engineer's Estimate must be maintained at all times. The Estimate is to be clearly labeled as the Engineer's Estimate and kept in a secured location. It is exempt from Freedom of Information (FOI) requests by State law, and should be removed from any correspondence files prior to a FOI review.

The TRNS*PORT system will assign unit prices for all standard item codes. The system's price bank is continually updated with contractor bid prices as new contracts are awarded. Keep in mind however, that these prices can, and should be overridden if they are not what you think they should be. Each unit price must be reviewed and evaluated based on regional price histories, estimated quantities and any special or unusual circumstances pertinent to the specific project. If you determine the need to override, or change a computer-generated price, make sure to 'lock' the change. This is accomplished by changing the default values for "Source of Price" and "Estimated Price Lock" to "E" and "Y" respectively.

TRNS*PORT does not maintain unit prices for non-standard items. These will have to be entered into the system by the proposal's originator. All prices should reflect the labor, equipment and materials needed to perform the work. They should also take into consideration the quantity, method of placement and any

site conditions that may affect the rate of production. Further details on estimating procedures and required documentation are included later in this manual.

At no time should the Engineer's Estimate be sent through the mail. Once the proposal assembly is complete, the Engineer's Estimate should be transferred to Construction Division by changing the *Access Control Group* in the TRNS*PORT files to "CD". Security of the estimate is maintained within the TRNS*PORT system by establishing limited control groups and assigning specific individuals to these groups. Once the control group is changed to CD, only those individuals belonging to the Construction Division Control Group can access the TRNS*PORT files.

No Plan & Minimum Plan Quantity Support Report

The Form C-99 is a necessary and valuable tool in estimating. It is required documentation for all lump sum grading projects and can be found on Construction Division's server at <\\0501coconst\public\forms>. To have a good estimated unit price for lump sum grading, it is necessary to have accurate estimations of excavation and rock quantities, clearing and grubbing quantities, waste quantities and haul distances. Not having these details will make it difficult, if not impossible, to evaluate the contractors' bid price for this item.

Submittal Letter

Included as part of the proposal assembly should be a Submittal Letter requesting that the project be advertised. The information provided in this letter will assist Construction Division in its review of the assembly. Of specific interest is the TRNS*PORT Contract ID, funding source, state project number, and showing information when applicable. It should also include the anticipated advertisement date and Order number. A sample is included in the manual appendices.

Do not include the Estimate amount in this letter! This amount, including the engineering and contingencies, is to be included on the C-117 and forwarded to the appropriate funding division for verification.

Submission to Construction Division

Once the proposal assembly has been completed, and funding verified, Construction Division should be notified that an assembly has been submitted. This notification can be accomplished electronically via e-mail, or by telephone.

If the district has scanning equipment, submittal to Construction Division can be totally electronic. Most proposal documents, with the exception of sketches, location maps and the Form C-117 which requires a signature, can be sent electronically. The others can be sent by mail or scanned if equipment is available.

Below is a list of items that must be submitted for processing:

Bidding Proposal – prepared using the CNSP program

Place this on the District server and notify Construction Division that it's there. Construction Division will review and print the proposal document for advertisement.

Sketches, Location Maps and Permits – when applicable

Original hardcopies can be mailed to Construction Division along with the Form C-117. These will become part of the printed document and as such, should be clear and have high-quality print; they should not be faxed copies. If scanning equipment is available, these can be scanned and placed on the District server along with the proposal document.

Form C-117 – this requires the District Administrator's signature and therefore must be faxed or mailed to Construction Division

If scanning equipment is available, the signed form can be scanned and placed on the District server along with the proposal document.

Form C-99 – this is required on all "No Plan" projects that have lump sum grading

This can be placed on the District server along with the proposal document or it can be mailed along with the Form C-117.

Submittal Letter – a sample is included in the appendices of this manual

This can be sent electronically as part of the notification to Construction Division that a proposal has been submitted; it can be placed on the District server along with the proposal document; or it can be mailed along with the Form C-117.

Price Documentation – this is required for lump sum grading, all non-standard items, and standard items for which the TRNS*PORT unit price has been changed

For security reasons this documentation should be placed in a secure District server file or mailed in a "Confidential" envelope to the Construction Division SAAP Coordinator.

TRNS*PORT Files – the Control Group must be changed to “CD” in order to transfer the files to Construction Division

This access code must be changed on the Prime Project (PES 1.1.1), the Proposal (PES 3.1.1), and each of the Projects (PES 1.2.1).

The District SAAP Coordinator will be responsible for securing all authorizations required for advertising a project – permits, R/W clearance, public interest statements, etc. A copy of these documents will be kept on file by the District SAAP Coordinator and available for submission to Construction Division if requested.

Make a complete and detailed review of each proposal document before submitting it to Construction Division. Make sure the appropriate provisions and copied notes are included; that all necessary bid items have been included and that there are no inconsistencies.

No revisions will be allowed after advertisement unless approved by the Contract Engineer. Ten days prior to receipt of bids is the latest possible date any revisions can be made as set forth in the Code of Virginia. If Construction Division discovers any discrepancies or errors after this date, the proposal will be delayed or withdrawn, and the District SAAP Coordinator notified. The TRNS*PORT files will then be transferred back to the appropriate District Control Group in order for corrections to be made.

When a proposal is delayed, or if the District elects to re-advertise a proposal that was previously withdrawn, the CNSP proposal document should be corrected and updated to reflect the new bid letting date. It should also be reviewed carefully to ensure that the time limit is still realistic and that any recent revisions to the *Road & Bridge Specifications* have been included as appropriate.

When a proposal is re-advertised – either due to it being withdrawn or due to rejection by the Commonwealth Transportation Board, the TRNS*PORT files will require modification. When a project is re-advertised for the first time, add a “B” to the end of the Contract ID, Prime Project and each Project, or PCN. If the same project is advertised a third time, add a “C” to the end of these numbers. The Order Number will remain the same. If a project is delayed, no changes to TRNS*PORT are required. Once all corrections or revisions have been made, the proposal assembly should be re-submitted as outlined in this manual.

ENGINEER'S ESTIMATE

The objective of the Engineer's Estimate is to provide a reliable measure for programming funds, determining the best possible design option, and for comparison to determine the competitiveness of bids submitted. This estimate should be developed in accordance with the Virginia Public Procurement Act and Department guidelines. By law, the Engineer's Estimate is exempt from Freedom of Information (FOI) requests and must be removed prior to examination of Department records.

The Engineer's Estimate should be developed in an honest attempt to determine a reasonable cost that we could expect to pay for construction work. It should be representative of current market conditions including the availability of resources and materials, and contractor interest.

The Estimate should be timely in that it takes into account site conditions at the time work is anticipated to begin. It should give consideration to potential constraints placed on productivity by weather, environmental requirements, traffic conditions, seasonal and work-hour limitations.

The most critical element in developing an Engineer's Estimate is a clear understanding of the work to be accomplished and the conditions under which the work will be performed. In order for an estimate to be meaningful, and bids to be competitive, it is mandatory that the bidding proposal clearly conveys this information.

As a tool to assist in developing the Engineer's Estimate, the Department uses computer-generated prices based on historical data. TRNS*PORT stores the contractors' bid prices for all standard items awarded. This data is then categorized by location, roadway system, class of project, quantity and date. The system generates unit prices when sufficient data exists; however, these prices must be reviewed carefully. Within the bid histories, there may be instances when unusual site conditions or unique circumstances on a particular project resulted in the unit price for a given item coming in either high or low. These highs and lows can affect the historical bid average and throw off the expected prices for a particular item. The computer cannot make an independent analysis of conditions present on each project. Its prices are based solely on item code, quantity and bid prices received. It is up to the District to assess each computer-generated price and make adjustments as necessary.

In cases where sufficient data does not exist, or in the case of non-standard items, the system will not generate a unit price. The unit price will have to be determined by the District and entered into TRNS*PORT. If questions or

concerns arise during the development of an Engineer's Estimate, Construction Division Estimators are available to assist in pricing contract bid items.

While a project is on advertisement, the District still has an opportunity to collect additional information and refine the Estimate. Any desired changes at this point however, must be forwarded to Construction Division for entry into the TRNS*PORT system. Remember – the Control Group has been changed and the District no longer has access to the Estimate. After reviewing the Estimate, Construction Division may recommend that a unit price be revised to more accurately reflect current market conditions or regional prices. Any suggested price changes will be addressed with the District SAAP Coordinator for their input. No changes to unit prices will be made without written consent of the District SAAP Coordinator. The SAAP estimate is the District's responsibility. Guidance will be provided, but it is ultimately the District's estimate. All adjustments must be made no later than seven days prior to the predetermined bid letting date. At that time, the Engineer's Estimate becomes final and cannot be changed.

As a general rule, low bids are considered to be within an *acceptable* range if they do not exceed the Engineer's Estimate by more than 7 percent. A detailed bid analysis, including a detailed review of the Engineer's Estimate and bid tabulations, will be made on all projects following receipt of bids. Each low bid will undergo analysis to consider possible front loading, unbalanced bidding or evidence of collusive bidding practices. Any of these situations may be cause for rejection regardless of where the bid lies in relation to the Engineer's Estimate.

If it looks like a project is going to be recommended for rejection, Construction Division will notify the District Administrator, District Construction Engineer and Maintenance Engineer prior to meeting with the Chief Engineer. They will be asked for their recommendation, and to provide any additional information that may not have been accurately reflected in the Engineer's Estimate. Projects that do not have adequate justification for re-evaluating the Estimate will in all likelihood be recommended for rejection if the low bid exceeds the Engineer's Estimate by more than 7 percent.

Once their evaluation is completed, Construction Division will review their analyses with the Chief Engineer prior to a recommendation being provided to the Commonwealth Transportation Board (CTB). This is generally done within one week of the bid letting.

In fairness to the industry, a contractor may request a hearing with the Contract Engineer prior to rejection of his bid. In these circumstances the contractor will be given an opportunity to explain any variances or extraordinary conditions that affected how specific items were priced. An evaluation may then be made based on any additional information provided by the contractor. Even then however, no explanation or actual estimate prices are given to the contractor.

The Department has the same right. If prices on the low bid appear to be unbalanced, the bidder will be required to justify the bid prior to Construction Division recommending it for award. Again, an evaluation will be made based on the Engineer's Estimate and any additional information provided by the contractor.

One of the most common estimating errors is to estimate a project based on its budget. The Engineer's Estimate should be an honest reflection of the anticipated cost based on current market conditions and should be totally independent of the funds budgeted to perform the work.

On other occasions, SAAP projects are advertised after unsuccessful attempts to negotiate a work order. When this situation occurs, the work order prices submitted should not be used as part of the Engineer's Estimate. An estimate must be worked up independently, ignoring prior knowledge of the solicited work order prices. Obviously, if the prices were not acceptable as a work order, they should not be acceptable as an Engineer's Estimate for receipt of bids.

Estimate Documentation

The widespread use of the SAAP process for advertising projects and the development of the Engineer's Estimate at the District level necessitates consistency in the standard of documentation used in creating the Estimate. As such, the Department has set certain audit standards that must be adhered to when developing Engineer Estimates. These documentation standards must be followed when establishing unit prices for non-standard items; when changing TRNS*PORT generated prices; or when using lump sum grading as a pay item.

The methodology used by TRNS*PORT to generate unit prices is well documented. When non-standard items are used however, unit prices are not generated by the system and must be determined by the user. The District will document the methodology used to determine unit prices for non-standard items and submit this documentation to Construction Division. The documentation can be in the form of a cost-based estimate using labor, equipment and material costs to derive unit prices. This is the most accurate and uniformly accepted method of construction estimation, and the one recommended by Construction Division. When this method is used, it is suggested that the enclosed sample format be followed. When other methods are used to derive non-standard unit prices, the method used should be documented and any support documentation submitted to Construction Division.

Standard items for which the TRNS*PORT generated price has been changed will also require documentation. There are some instances when computer generated unit prices will need to be changed due to circumstances pertinent to

the specific project. A justification, or explanation of why the change was made, and how the revised price was derived will also need to be submitted to Construction Division.

Lastly, the unit price for lump sum grading will always require documentation. Due to its nature, lump sum grading will require a **cost-based estimate** including the labor, equipment and material estimated to perform the work. Without this breakdown, it is virtually impossible to evaluate the estimated unit price or the bid prices received.

There are several accepted methodologies for determining unit prices. The following is a brief summation of the most common:

Cost-Based Estimate – this method of pricing involves looking at the individual components required to complete a unit of work. What labor, equipment and material are required? How many units of work can be completed in a day, week, month or season? How will productivity be effected by weather, traffic or site conditions?

Construction Division draws on two standard sources for **Labor** costs: the Davis-Bacon wage-rates and the Commonwealth's average wage-rates based on Virginia Employment Commission records. Note that Davis-Bacon wage-rates are required on Federal-Aid projects and represent a *minimum* rate for each classification. The Employment Commission rates on the other hand, are statewide averages. Another good source available to the District would be payrolls from on-going projects. For **Equipment**, the Division has adopted the *Rental Rate Blue Book*, which includes the overhead or operating costs for each piece of equipment. This source can also be supplemented with District force account records if available. **Material** costs can be obtained by calling local suppliers and asking for price quotes. The District may also choose to use invoice prices supplied by contractors on the Form C-22, Itemized Inventory Statement for Stored Materials.

Price Assigned by Others – this is when someone else derives unit prices either due to out-sourcing or the specific nature of the work (i.e. specialty items not within the Department's expertise). The methodology used for deriving these prices should be documented and provided to you by the consultant for audit purposes.

Average Price or Historical Data – used when the work is more specialized, as with certain maintenance operations. Guardrail and pavement marking are two such examples. This method allows for using unit prices from an on-going contract or recent bid tabulations. While this is an acceptable method, it is not one that is recommended. Keep in mind that each project is unique and that differing site conditions and total

quantity will affect unit prices. It would be more reliable in the long run to prepare a cost-based estimate for the item(s) in question.

Priced to Match Unit Price of Like Item – when multiple projects are advertised under one contract, the unit price for items appearing on multiple projects should be the same on each project. In these cases it is acceptable to use the most accurate price based on the total contract quantity and change the unit prices on each of the projects to match.

Change to Standard Prices due to Unique Circumstances – examples would include: limited access to the work area requiring hand-work or unusual placement techniques; work hour restrictions; working under heavy traffic conditions; extremely large or small quantities. These are all factors that may justify revising a standard, or computer-generated price, and must be documented in order to explain the revision. Again, the recommended method of documenting the revised price would be to develop a cost-based estimate as described above.

In order to maintain its integrity, the Engineer's Estimate must remain a secure document. All printed copies of the Estimate are to be kept in secure locations not readily accessible to anyone but those persons approved to see the document. It is the Department's practice that as few people as necessary see the Engineer's Estimate. This point cannot be too strongly emphasized. The individual working up the estimate, the District SAAP Coordinator, the Construction Division Estimator and the Contract Engineer are the only people who routinely need to review the Engineer's Estimate. On **no occasion** shall the Department share the Engineer's Estimate with members of the contracting industry. We shall not solicit aid from the industry in developing costs, nor will we explain to the industry our rationale of costs.

In summary, the Engineer's Estimate is created in the TRNS*PORT system. The computer-generated prices are to be reviewed for accuracy and modified as deemed necessary. Any changes to these prices must be "locked" in the system, documented and the documentation sent to Construction Division. Prices for non-standard items in which TRNS*PORT does not have price histories, must be determined by the user. These prices must be documented and this documentation forwarded to Construction Division. Due to its nature, lump sum grading will require a cost-based estimate work up; this too must be submitted to Construction Division. All estimate prices should reflect the labor, equipment and materials needed to perform the work, taking into account production rates and existing site conditions. The Estimate should be timely in that it takes into consideration current market conditions such as availability of materials and other resources, as well as any potential limits or restrictions imposed on the contractor's operations. Construction Division Estimators are always available to assist the District in developing and documenting unit prices for SAAP estimates.

The Engineer's Estimate is a secure document and should be maintained in confidence at all times. Remember that by state law, this Estimate is exempt from Freedom of Information requests and must be removed from all correspondence prior to a FOI review.